## RAW SEQUENCE LISTING PATENT APPLICATION US/08/468,161

DATE: 07/13/95 TIME: 17:50:25

INPUT SET: S4774.raw



This Raw Listing contains the General Information Section and up to the first 5 pages.

| 1                          |             | SEO   | JENCE LISTING         | •             |
|----------------------------|-------------|---|-----------------------|---------------|
| 2                          |             |   |                       |               |
| 3                          | (1) G       | eneral Information:   |                       | E M T E M E M |
| 4<br>5<br>6<br>7<br>8<br>9 | (i)         | APPLICANT: DeFeo-Jones, Debo<br>Feng, Dong-Mei<br>Garsky, Victor M.<br>Jones, Raymond E.<br>Oliff, Allen I. |                       | ENTERED       |
| 10                         | ,,,,        | TITLE OF THURWITON, NOVEL D   | DET DEG               |               |
| 11<br>12                   | (11)        | TITLE OF INVENTION: NOVEL PR  | EPTIDES               |               |
| 13                         | (iii)       | NUMBER OF SEQUENCES: 146  |                       |               |
| 14                         | <b>,</b> ,  |   |                       |               |
| 15                         | (iv)        | CORRESPONDENCE ADDRESS:   |                       |               |
| 16                         |             | (A) ADDRESSEE: DAVID A. MUT   |                       |               |
| 17<br>18                   |             | (B) STREET: 126 E. Lincoln (C) CITY: RAHWAY   | Avenue, P.O. BOX 200  | 0             |
| 19                         |             | (D) STATE: NEW JERSEY   |                       |               |
| 20                         |             | (E) COUNTRY: U.S.A.   |                       |               |
| 21                         |             | (F) ZIP: 07065  |                       |               |
| 22                         |             |   | ·                     |               |
| 23                         | (V)         | COMPUTER READABLE FORM:   | _                     |               |
| 24                         |             | (A) MEDIUM TYPE: Floppy dis   |                       |               |
| 25<br>26                   |             | (B) COMPUTER: IBM PC compat   |                       |               |
| 20<br>27                   |             | (C) OPERATING SYSTEM: PC-DC (D) SOFTWARE: Patentin Rele   |                       | 1.30          |
| 28                         |             | (b) bottward. I decircin kere   | dde writt, verbron wr |               |
| 29                         | (vi)        | CURRENT APPLICATION DATA:   |                       |               |
| 30                         |             | (A) APPLICATION NUMBER:   |                       |               |
| 31                         |             | (B) FILING DATE:  |                       |               |
| 32                         |             | (C) CLASSIFICATION:   |                       |               |
| 33<br>34                   | /           | AMMODNEY/AGENM INDODUMETON.   |                       |               |
| 35                         | ( ^ 1 1 1 ) | ATTORNEY/AGENT INFORMATION: (A) NAME: Muthard, David A.   |                       |               |
| 36                         |             | (B) REGISTRATION NUMBER: 35   |                       |               |
| 37                         |             | (C) REFERENCE/DOCKET NUMBER   | •                     |               |
| 38                         |             | ,   |                       |               |
| 39                         | (ix)        | TELECOMMUNICATION INFORMATIO  | N:                    |               |
| 40                         |             | (A) TELEPHONE: (908)594-390   | )3                    | •             |
| 41                         |             | (B) TELEFAX: (908)594-4720  |                       |               |
| 42<br>43                   |             |   |                       |               |
| 43<br>44                   | (2) TNFO    | RMATION FOR SEQ ID NO:1:  |                       |               |
| 45                         | (Z) INPO    | WALLOW FOR DBY ID HO.I.   |                       |               |
| 46                         | (i)         | SEQUENCE CHARACTERISTICS:   |                       |               |

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|                      |            |            |                         |            |            |            |             |            |            |            |            |            | ALVA       | O A D      | LI. U      | 7//7.      |
|----------------------|------------|------------|-------------------------|------------|------------|------------|-------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| 47<br>48<br>49       |            | (В         | ) LEI<br>) TYI<br>) STI | ?E: a      | amin       | o ac       | iđ          |            | s          |            |            |            |            |            |            |            |
| 50<br>51             |            | •          | ) TO                    |            |            |            | _           |            |            |            |            |            |            |            |            |            |
| 52<br>53             | (ii)       | MOL        | MOLECULE TYPE: peptide  |            |            |            |             |            |            |            |            |            |            |            |            |            |
| 54<br>55             | (iii)      | НҮР        | HYPOTHETICAL: NO        |            |            |            |             |            |            |            |            |            |            |            |            |            |
| 56<br>57             | (iv)       | ANT        | ANTI-SENSE: NO          |            |            |            |             |            |            |            |            |            |            |            |            |            |
| 58<br>59<br>60       | (V)        | FRA        | GMEN'                   | וצד יו     | PE:        | inte       | rnal        |            |            |            |            | •          |            |            |            |            |
| 61<br>62             |            |            |                         |            |            |            |             |            |            |            |            |            |            |            |            |            |
| 63<br>64             | (xi)       | SEQ        | UENCI                   | E DE:      | SCRI       | PTIO       | <b>V:</b> S | EQ I       | D NO       | :1:        |            |            |            |            |            |            |
| 65<br>66<br>67       | Met<br>1   | Lys        | Pro                     | Asn        | Ile<br>5   | Ile        | Phe         | Val        | Leu        | Ser<br>10  | Leu        | Leu        | Leu        | Ile        | Leu<br>15  | Glu        |
| 68<br>69             | Lys        | Gln        | Ala                     | Ala<br>20  | Val        | Met        | Gly         | Gln        | Lys<br>25  | Gly        | Gly        | Ser        | Lys        | Gly<br>30  | Arg        | Leu        |
| 70<br>71<br>72       | Pro        | Ser        | Glu<br>35               | Phe        | Ser        | Gln        | Phe         | Pro<br>40  | His        | Gly        | Gln        | Lys        | Gly<br>45  | Gln        | His        | Tyr        |
| 73<br>74<br>75       | Ser        | Gly<br>50  | Gln                     | Lys        | Gly        | Lys        | Gln<br>55   | Gln        | Thr        | Glu        | Ser        | Lys<br>60  | Gly        | Ser        | Phe        | Ser        |
| 76<br>77<br>78<br>79 | Ile<br>65  | Gln        | Tyr                     | Thr        | Tyr        | His<br>70  | Val         | Asp        | Ala        | Asn        | Asp<br>75  | His        | Asp        | Gln        | Ser        | Arg<br>80  |
| 80<br>81<br>82       | Lys        | Ser        | Gln                     | Gln        | Tyr<br>85  | Asp        | Leu         | Asn        | Ala        | Leu<br>90  | His        | Lys        | Thr        | Thr        | Lys<br>95  | Ser        |
| 83<br>84<br>85       | Gln        | Arg        | His                     | Leu<br>100 | Gly        | Gly        | Ser         | Gln        | Gln<br>105 | Leu        | Leu        | His        | Asn        | Lys<br>110 | Gln        | Glu        |
| 86<br>87<br>88       | Gly        | Arg        | Asp<br>115              | His        | Asp        | Lys        | Ser         | Lys<br>120 | Gly        | His        | Phe        | His        | Arg<br>125 | Val        | Val        | Ile        |
| 89<br>90<br>91       | His        | His<br>130 | Lys                     | Gly        | Gly        | Lys        | Ala<br>135  | His        | Arg        | Gly        | Thr        | Gln<br>140 | Asn        | Pro        | Ser        | Gln        |
| 92<br>93<br>94       | Asp<br>145 | Gln        | Gly                     | Asn        | Ser        | Pro<br>150 | Ser         | Gly        | Lys        | Gly        | Ile<br>155 | Ser        | Ser        | Gln        | Tyr        | Ser<br>160 |
| 95<br>96<br>97       | Asn        | Thr        | Glu                     | Glu        | Arg<br>165 | Leu        | Trp         | Val        | His        | Gly<br>170 | Leu        | Ser        | Lys        | Glu        | Gln<br>175 | Thr        |
| 98<br>99             | Ser        | Val        | Ser                     | Gly<br>180 | Ala        | Gln        | Lys         | Gly        | Arg<br>185 | Lys        | Gln        | Gly        | Gly        | Ser<br>190 | Gln        | Ser        |
|                      |            |            |                         |            |            |            |             |            |            |            |            |            |            |            |            |            |

## RAW SEQUENCE LISTING PATENT APPLICATION US/08/468,161

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| 100 |     |      |       |       |       |       |      |      |     |     |     |     |     |     |     |     |     |
|-----|-----|------|-------|-------|-------|-------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 101 |     | Ser  | Tyr   | Val   | Leu   | Gln   | Thr  | Glu  | Glu | Leu | Val | Ala | Asn | Lys | Gln | Gln | Arg |
| 102 |     |      |       | 195   |       |       |      |      | 200 |     |     |     |     | 205 |     |     |     |
| 103 |     |      |       |       |       |       |      |      |     |     |     |     |     |     |     |     |     |
| 104 |     | Glu  | Thr   | Lys   | Asn   | Ser   | His  | Gln  | Asn | Lys | Gly | His | Tyr | Gln | Asn | Val | Val |
| 105 |     |      | 210   |       |       |       |      | 215  |     |     |     |     | 220 |     |     |     |     |
| 106 |     |      |       |       |       |       |      |      |     |     |     |     |     |     |     |     |     |
| 107 |     | Glu  | Val   | Arg   | Glu   | Glu   | His  | Ser  | Ser | Lys | Val | Gln | Thr | Ser | Leu | Cys | Pro |
| 108 |     | 225  |       |       |       |       | 230  |      |     |     |     | 235 |     |     |     |     | 240 |
| 109 |     |      |       |       |       |       |      |      |     |     |     |     |     |     |     |     |     |
| 110 |     | Ala  | His   | Gln   | Asp   | Lys   | Leu  | Gln  | His | Gly | Ser | Lys | Asp | lle | Phe | Ser | Thr |
| 111 |     |      |       |       |       | 245   |      |      |     |     | 250 |     |     |     |     | 255 |     |
| 112 |     |      |       |       |       |       |      |      |     |     |     |     |     |     |     |     |     |
| 113 |     | Gln  | Asp   | Glu   | Leu   | Leu   | Val  | Tyr  | Asn | Lys | Asn | Gln | His | Gln | Thr | Lys | Asn |
| 114 |     |      |       |       | 260   |       |      |      |     | 265 |     |     |     |     | 270 |     |     |
| 115 |     |      |       |       |       |       |      |      |     |     |     |     |     |     |     |     |     |
| 116 |     | Leu  | Asn   | Gln   | Asp   | Gln   | Gln  | His  | Gly | Arg | Lys | Ala | Asn | Lys | Ile | Ser | Tyr |
| 117 |     |      |       | 275   |       |       |      |      | 280 |     |     |     |     | 285 |     |     |     |
| 118 |     |      |       |       |       |       |      |      |     |     |     |     |     |     |     |     |     |
| 119 |     | Gln  | Ser   | Ser   | Ser   | Thr   | Glu  | Glu  | Arg | Arg | Leu | His | Tyr | Gly | Glu | Asn | Gly |
| 120 |     |      | 290   |       |       |       |      | 295  |     |     |     |     | 300 |     |     |     |     |
| 121 |     |      |       |       |       |       |      |      |     |     |     |     |     |     |     |     |     |
| 122 |     | Val  | Gln   | Lys   | Asp   | Val   | Ser  | Gln  | Ser | Ser | Ile | Tyr | Ser | Gln | Thr | Glu | Glu |
| 123 |     | 305  |       |       |       |       | 310  |      |     |     |     | 315 |     |     |     |     | 320 |
| 124 |     |      |       |       |       |       |      |      |     |     |     |     |     |     |     |     |     |
| 125 |     | Lys  | Ala   | Gln   | Gly   | Lys   | Ser  | Gln  | Lys | Gln | Ile | Thr | Ile | Pro | Ser | Gln | Glu |
| 126 |     |      |       |       |       | 325   |      |      |     |     | 330 |     |     |     |     | 335 |     |
| 127 |     |      |       |       |       |       |      |      |     |     |     |     |     |     |     |     |     |
| 128 |     | Gln  | Glu   | His   | Ser   | Gln   | Lys  | Ala  | Asn | Lys | Ile | Ser | Tyr | Gln | Ser | Ser | Ser |
| 129 |     |      |       |       | 340   |       |      |      |     | 345 |     |     |     |     | 350 |     |     |
| 130 |     |      |       |       |       |       |      |      |     |     |     |     |     |     |     |     |     |
| 131 |     | Thr  | Glu   |       | Arg   | Arg   | Leu  | His  |     | Gly | Glu | Asn | Gly | Val | Gln | Lys | Asp |
| 132 |     |      |       | 355   |       |       |      |      | 360 |     |     |     |     | 365 |     |     |     |
| 133 |     |      |       |       |       |       |      |      |     |     |     |     |     |     | _   |     | _   |
| 134 |     | Val  |       | Gln   | Arg   | Ser   | Ile  | _    | Ser | Gln | Thr | Glu | -   | Leu | Val | Ala | Gly |
| 135 |     |      | 370   |       |       |       |      | 375  |     |     |     |     | 380 |     |     |     |     |
| 136 |     |      |       |       | _     |       |      |      |     |     |     |     | _   |     |     |     | _   |
| 137 |     | _    | Ser   | Gln   | Ile   | Gln   |      | Pro  | Asn | Pro | Lys |     | Glu | Pro | Trp | His |     |
| 138 |     | 385  |       |       |       |       | 390  |      |     |     |     | 395 |     |     |     |     | 400 |
| 139 |     | _    |       | _     |       | _     | _    |      | _   | _   |     | _   |     |     | _   | _   |     |
| 140 |     | Glu  | Asn   |       | Lys   | -     |      |      | -   |     |     |     |     | -   |     |     | _   |
| 141 |     |      |       |       |       | 405   |      |      |     |     | 410 |     |     |     |     | 415 |     |
| 142 |     |      |       |       | _     | _     | _    |      |     |     |     |     |     |     |     | •   |     |
| 143 |     | Leu  | Leu   | Ser   | His   | Glu   | G1n  | Lys  | Gly | _   | His | Gln | His | GŢĀ |     | His | GTÀ |
| 144 |     |      |       |       | 420   |       |      |      |     | 425 |     |     |     |     | 430 |     |     |
| 145 |     |      | _     | _     |       |       |      |      |     | T   |     | _   | _   | _   | _   | _   | 1   |
| 146 |     | Gly  | Leu   | _     | Ile   | Val   | Ile  | Ile  |     | GIn | GLu | Asp | Asp |     | Asp | Arg | His |
| 147 |     |      |       | 435   |       |       |      |      | 440 |     |     |     |     | 445 |     |     |     |
| 148 |     | _    |       |       |       |       |      |      | _   | _   |     | _   | _   |     |     |     |     |
| 149 |     | Leu  |       | Gln   | His   | Leu   | Asn  |      | Asp | Arg | Asn | Pro |     | Phe | Thr |     |     |
| 150 |     | -    | 450   |       |       |       |      | 455  |     |     |     |     | 460 |     |     |     |     |
| 151 |     |      |       |       |       |       |      |      |     |     |     |     |     |     |     |     |     |
| 152 | (2) | INFO | RMAT: | ION I | FOR S | SEQ ] | D NO | ):2: |     |     |     |     |     |     |     |     |     |

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153
           (i) SEQUENCE CHARACTERISTICS:
154
155
                (A) LENGTH: 15 amino acids
                (B) TYPE: amino acid
156
157
                (C) STRANDEDNESS: single
158
                (D) TOPOLOGY: linear
159
          (ii) MOLECULE TYPE: peptide
160
161
162
         (iii) HYPOTHETICAL: NO
163
164
          (iv) ANTI-SENSE: NO
165
166
           (v) FRAGMENT TYPE: internal
167
168
169
170
171
          (xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:
172
           Gly Lys Gly Ile Ser Ser Gln Tyr Ser Asn Thr Glu Glu Arg Leu
173
174
175
     (2) INFORMATION FOR SEQ ID NO:3:
176
177
178
           (i) SEQUENCE CHARACTERISTICS:
179
                (A) LENGTH: 11 amino acids
180
                (B) TYPE: amino acid
181
                (C) STRANDEDNESS: single
                (D) TOPOLOGY: linear
182
183
184
          (ii) MOLECULE TYPE: peptide
185
186
         (iii) HYPOTHETICAL: NO
187
188
          (iv) ANTI-SENSE: NO
189
190
           (v) FRAGMENT TYPE: internal
191
192
193
194
195
          (xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:
196
197
          Asn Lys Ile Ser Tyr Gln Ser Ser Ser Thr Glu
198
           1
                           5
199
200
     (2) INFORMATION FOR SEQ ID NO:4:
201
           (i) SEQUENCE CHARACTERISTICS:
202
203
                (A) LENGTH: 19 amino acids
204
                (B) TYPE: amino acid
205
                (C) STRANDEDNESS: single
```

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|            |             |   | MALOI   | 3D:1:34//4.10 |
|------------|-------------|---|---------|---------------|
| 206        |             | (D) TOPOLOGY: linear                        |         |               |
| 207<br>208 | (ii)        | MOLECULE TYPE: peptide                      |         |               |
| 209        |             |   |         |               |
| 210        | (iii)       | HYPOTHETICAL: NO                            |         |               |
| 211        |             |   |         |               |
| 212        | (iv)        | ANTI-SENSE: NO                              |         |               |
| 213        |             |   |         |               |
| 214        | (V)         | FRAGMENT TYPE: internal                     |         |               |
| 215        |             |   |         |               |
| 216        |             | •   |         |               |
| 217        |             |   |         |               |
| 218        |             |   |         |               |
| 219        | (Xi)        | SEQUENCE DESCRIPTION: SEQ ID NO:4:          | ,       |               |
| 220        |             |   |         |               |
| 221        | _           | Glu Asn Gly Val Gln Lys Asp Val Ser Gln Arg | Ser II  |               |
| 222        | 1           | 5 10  |         | 15            |
| 223        |             | m1 m2                                       |         |               |
| 224        | GIn         | Thr Glu                                     |         |               |
| 225        |             | ,   |         |               |
| 226        | / O. ) THEO | DV/HTAN BAD 450 TD NA 5                     |         | •             |
| 227        | (2) INFO    | RMATION FOR SEQ ID NO:5:                    |         |               |
| 228        | , , ,       | CROVENIAR CULD AMEDICANTAG                  |         |               |
| 229        | (1)         | SEQUENCE CHARACTERISTICS:                   |         |               |
| 230        |             | (A) LENGTH: 19 amino acids                  |         |               |
| 231        |             | (B) TYPE: amino acid                        |         |               |
| 232        |             | (C) STRANDEDNESS: single                    |         |               |
| 233<br>234 |             | (D) TOPOLOGY: linear                        |         |               |
| 234        | / : : \     | MOLEGILE MADE: nontido                      |         |               |
| 235        | (11)        | MOLECULE TYPE: peptide                      |         |               |
| 237        | / 1 1 1 1   | HYPOTHETICAL: NO                            |         |               |
| 238        | (111)       | HIPOINEIICAB. NO                            |         |               |
| 239        | (iv)        | ANTI-SENSE: NO                              |         |               |
| 240        | (17)        | MII DUNDI. NO                               |         |               |
| 241        | (v)         | FRAGMENT TYPE: intérnal                     |         |               |
| 242        | ( )         |   |         |               |
| 243        |             |   |         |               |
| 244        |             | •   |         |               |
| 245        |             |   |         |               |
| 246        | (xi)        | SEQUENCE DESCRIPTION: SEQ ID NO:5:          |         |               |
| 247        | , , ,       |   |         |               |
| 248        | Gly         | Glu Asn Gly Val Gln Lys Asp Val Ser Gln Ser | Ser Ile | Tyr Ser       |
| 249        | 1 1         | 5 10  |         | 15            |
| 250        |             |   |         |               |
| 251        | Gln         | Thr Glu                                     |         |               |
| 252        |             |   |         |               |
| 253        |             |   |         |               |
| 254        | (2) INFO    | RMATION FOR SEQ ID NO:6:                    |         |               |
| 255        | •           | -   |         |               |
| 256        | (i)         | SEQUENCE CHARACTERISTICS:                   |         |               |
| 257        | , , ,       | (A) LENGTH: 25 amino acids                  |         |               |
| 258        |             | (B) TYPE: amino acid                        |         |               |
|            |             | • •   |         |               |

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